

FIGURE 1

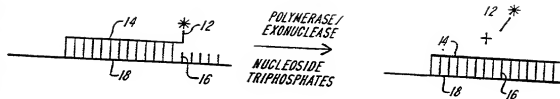
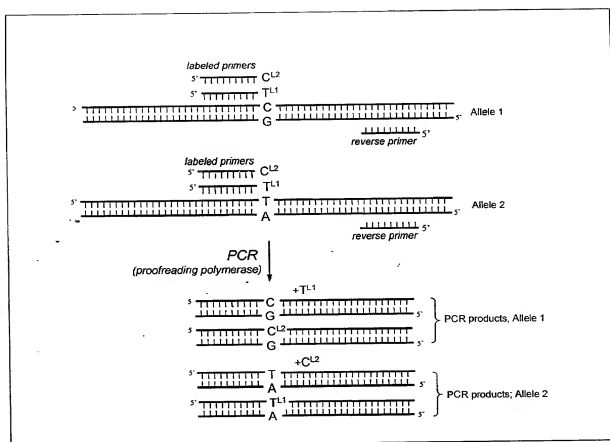


FIGURE 2



**FIGURE 3**

2012091961.00102

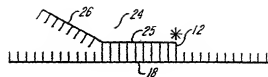


FIGURE 4

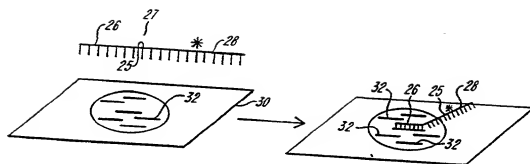


FIGURE 5

20122019619001

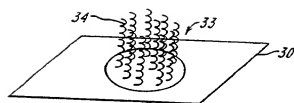


FIGURE 6

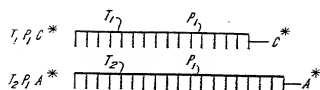


FIGURE 7

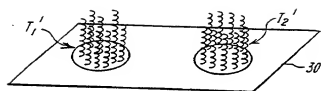


FIGURE 8



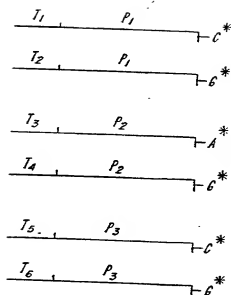


FIGURE 9

# Single Nucleotide Replacement Assay

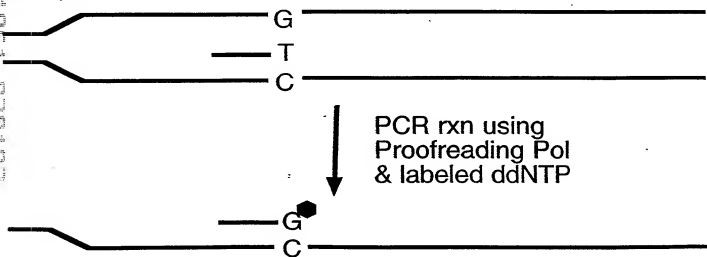


FIGURE 10

# Embodiment 1

FET-quencher-19619002

Fluorescent dye

tagged primer

Allele 1



MUTANT

reverse primer

Allele 2

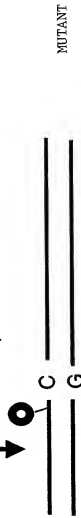


W.T.

PCR (Pfu, Pwo, or other proofreading polymerase)

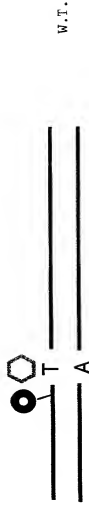
Fluorescent dye emission when dye-tagged nucleotide released

Product 1



MUTANT

Product 2



W.T.

FIGURE 11

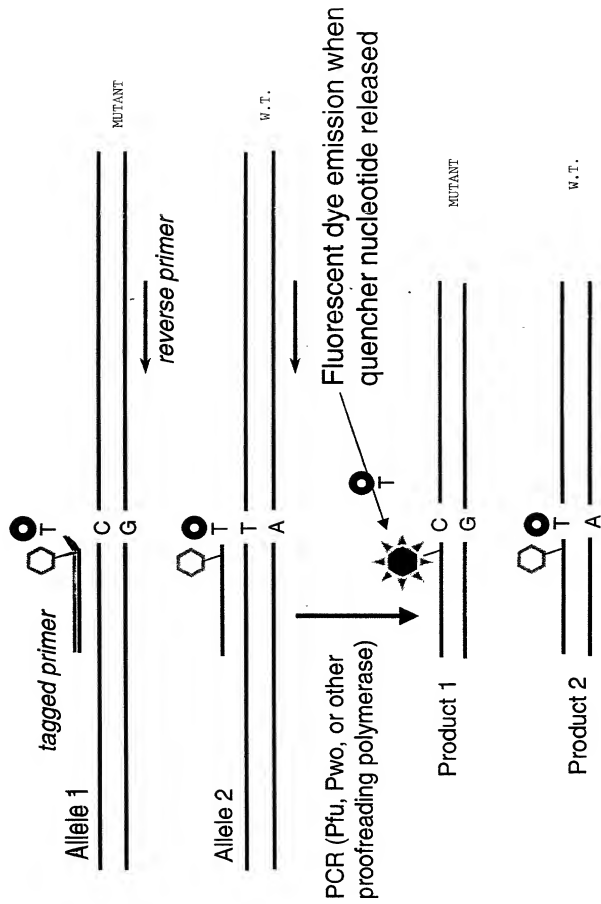


FIGURE 12

PCR

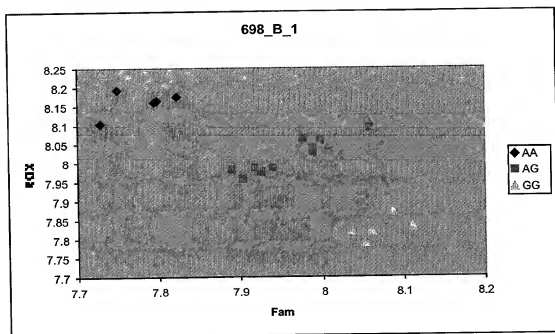
T:G T:A

Sequencing

T:G T:A

G A

**FIGURE 13**

**FIGURE 14**

ExoProofreading Assay on Genomic DNA  
GTC216+Q1

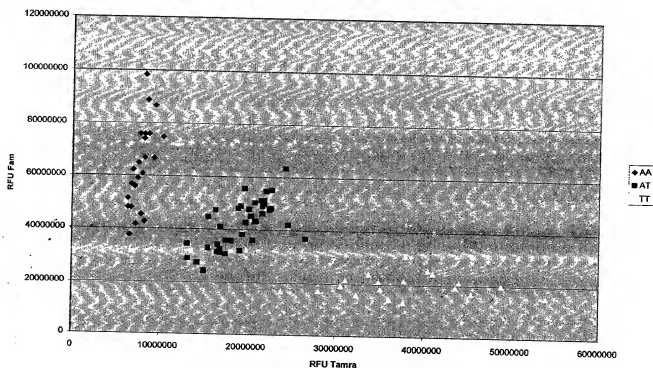


FIGURE 15











Starting Sample	Dialysate 15 min	Dialysate 20 min	Sample 45 min	Sample 60 min	
					NAT2-T <sup>341</sup> (labeled PCR product)
					NAT2-C <sup>341</sup> (labeled excised nucleotide)

FIGURE 16



Exo-Proofreading Assay Using Fluorescence Polarization Detection Method  
GTC216\_Q-1

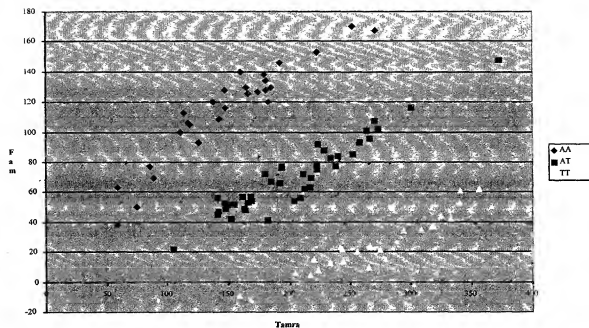


FIGURE 17

4061961.020102

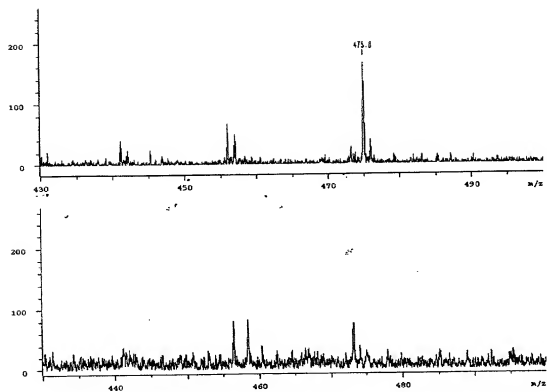
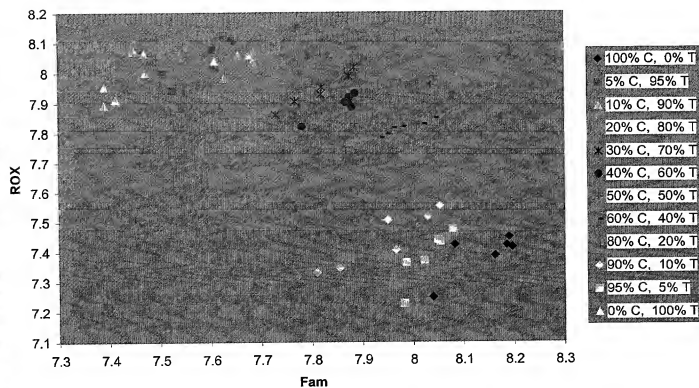


FIGURE 18

20120119619001

# Allele Frequency Determination 454\_F\_-2



**FIGURE 19**